

Translation

PATENT COOPERATION TREATY

PCT/JP2004/004428



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference JST-106-PCT | FOR FURTHER ACTION See Form PCT/IPEA/416 | |
| International application No. PCT/JP2004/004428 | International filing date (day/month/year) 29 March 2004 (29.03.2004) | Priority date (day/month/year) 23 April 2003 (23.04.2003) |
| International Patent Classification (IPC) or national classification and IPC G01N 21/55 | | |
| Applicant JAPAN SCIENCE AND TECHNOLOGY AGENCY | | |

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☒ (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:

☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the report

☐ Box No. II Priority

☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

☐ Box No. IV Lack of unity of invention

☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐ Box No. VI Certain documents cited

☐ Box No. VII Certain defects in the international application

☐ Box No. VIII Certain observations on the international application

| | |
|---|---|
| Date of submission of the demand 18 February 2005 (18.02.2005) | Date of completion of this report 18 March 2005 (18.03.2005) |
| Name and mailing address of the IPEA/JP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/004428

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ The international application as originally filed/furnished
- ☒ the description:
- pages _____ 1-27 _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- pages _____ 7-10 _____, as originally filed/furnished
- pages* _____, as amended (together with any statement) under Article 19
- pages* 1, 3-6, 11 received by this Authority on 18 February 2005 (18.02.2005)
- pages* _____ received by this Authority on _____
- ☒ the drawings:
- pages _____ 1/13-13/13 _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☒ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☒ the claims, Nos. _____ 2 _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|--------|---------|-----|
| Novelty (N) | Claims | 1, 3-11 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | 1, 3-11 | YES |
| | Claims | | NO |
| Industrial applicability (IA) | Claims | 1, 3-11 | YES |
| | Claims | | NO |

2. Citations and explanations (Rule 70.7)

Document 1: JP 2001-511249 A (Biacore AB.), 07 August, 2001, Full text & WO 98/34098 A

Document 2: JP 9-257701 A (Toto Ltd.), 03 October, 1997 Full text, (Family: none)

Document 3: JP 2002-214133 A (President of Hachinohe National College of Technology), 31 July, 2002, Full text (Family: none)

Claims 1, 3 to 11

Document 1 describes the invention of a differential surface plasmon resonance measuring device wherein light beams are scanned at angles including a resonance angle respectively in relation to different locations 1', 2', and 3' of a prism, and the reflected light is detected at corresponding locations 1, 2, and 3 of a line sensor.

Document 2 describes the invention of a differential surface plasmon resonance measuring device wherein antibody active region 33A and non-active region 33B are disposed in parallel and at the same time convergent light is entered in those regions, a resonance angle is measured and compared in a CCD.

Document 3 describes a well-known technology of forming an optical interface film having an equivalent level of index of refraction and adhesion such as PVC on a thin metal film in a differential resonance measuring device.

In SPR, however, projecting SPR reflected light induced in a sample solution portion with a reference solution portion using a plurality of mirrors on a series of CCD is not described in any of the documents.